

The Etiology of Impetigo Contagiosa.—K. DOHI and SH. DOHI (*Archiv f. Dermat. u. Syph.*, 1912, Band cxi, Heft 2), as the result of their study of impetigo contagiosa, conclude that there are two forms which are clinically and etiologically different. The first form is distinguished clinically by the formation of vesicles and blebs with clear, later cloudy, contents which leave thin crusts. In the contents of the lesions as well as in the surrounding skin white staphylococci may always be demonstrated. The second variety is characterized by the formation of wax-yellow thick crusts, and in the lesions of this form which become pustules, streptococci are always present. When yellow staphylococci are present in either form it is as the result of secondary infection. The first form, that due to the white staphylococci, frequently occurs epidemically in small children and only in the warm season of the year, while the second variety occurs sporadically at all seasons, in adults as well as children, but mostly in young people.

PATHOLOGY AND BACTERIOLOGY

UNDER THE CHARGE OF

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The Life-cycle of Spirochetes.—Much interest has lately been aroused in the supposed life-cycle of *Spirochæta pallida* which has been discovered in a complete series of phases. E. H. ROSS (*British Med. Jour.*, December 14, 1912) publishes a short paper indicating his understanding of the process, but we regret to say that priority cannot be given to him until there is a satisfactory answer to the letter of J. E. R. McDONAGH, of the London Lock Hospital, published in the *British Medical Journal* of December 21, 1912, for in this letter the latter states that the discovery is his own, and that he has given his colleague, Dr. Ross, material which showed the life-cycle, without any acknowledgement of the same having been made. It may be recalled that de Korte, in the *Practitioner* for June, 1906, described cyst-like bodies containing crystalline threads, in the chancres of syphilitic patients. Study by the jelly method of staining (*in vivo*) with borax methylene blue serves to show the parasites, which appear as copper-colored bodies, either free or ameboid, or enclosed in mononuclear cells. In the copper-colored cytoplasm are granules, and a nucleus which appears as a clear space with a black, dotted centre; should the parasite die, the sphere becomes colorless; 143 cases of preliminary and secondary syphilis have been examined, and the intracellular and extracellular bodies have been found in every case; they have been so found in chancre, in non-suppurative lymph nodes, in the blood from maculæ and condylomas, in ulcerating tonsils,

and in the peripheral blood. Ross considers that these round or pear-shaped bodies, originally free, become included in the cytoplasm of various kinds of cells; here they surround themselves with a wall. Growth proceeds and the chromatin divides. The chromatin within the parasites stains deeply in masses, and these masses vary in number from one to twelve. While still within the cell, in some cases, the chromatin mass, when it has reached full size, gives origin to several minute curled and twisted threads which closely resemble *Spirochete pallida*. Ross sees a parallel to the intercellular parasites found in guinea-pigs and earth-worms; he has failed so far to find these bodies in non-syphilitic cases. The suggestion is that the spirochetes are really microgametes or male elements, and that some of the round or pear-shaped bodies are possibly macrogametes or female elements. In the same number of the *British Medical Journal* appears a paper by E. JENNINGS, who has used the jelly method and found the same bodies as are here mentioned; while S. R. MOOLGAVKAR, still in the same number, describes similar bodies.

Thyroid Action and Reaction.—FARRANT (*Proc. Royal Soc. Med., Path. Soc.*, London, 1912, vi, 21) points out that there has been a general recognition among pathologists that the histological appearance of the thyroid is apt to be modified in sundry cases of infection. Hitherto, to our knowledge, no one has carefully studied this matter, so that Farrant's observations here given appear so novel as to demand confirmation. Nevertheless the fact that they emanate from Prof. Cushing's laboratory is in itself strong evidence in favor of their immediate acceptance. Farrant points out that the thyroid secretion reaches the circulation by means of the veins, that absorption occurs by the lymphatics is now known to be erroneous. The inferior thyroid veins are the largest, and more than two-thirds of the thyroid secretion reaches the left side by means of the thyroid veins. The left innominate vein receives the thoracic duct, the right, the right lymphatic trunk. Thus there is a correspondence between the opening of the thyroid veins and of the lymphatic trunks, and it may well be asked whether the thyroid has any influence upon the destruction of toxins reaching the venous system through the main lymphatics. Farrant illustrates by numerous photographs that in cases of infantile diarrhea, diphtheria, measles with bronchopneumonia, and whooping cough with bronchopneumonia, according to the duration and intensity of the disease, so does the thyroid present evidence of a succession of changes which can only be regarded as indicating increased production and discharge of secretion. He notes the following succession of changes: (1) The colloid becomes finely granular; (2) it becomes vacuolated and partially absorbed; (3) the cells lining the vesicles become more numerous, elongated, approaching the columnar type and arranged in masses; then the colloid becomes entirely absorbed, becoming crenated and infolded; (4) the infolding and cell increase tend to transform the vesicles into solid masses of cells. He next proves from experiment that this thyroid reaction is caused by the toxins, finding the same succession of changes to occur in the thyroids of guinea-pigs which have been injected with diphtheria toxin, and he is able to show that when the guinea-pigs injected with diphtheria toxin